

Correspondence

An unusual case of bezoar from Sudan

To the Editor

Abdel-Rahman and Ahmed¹ addressed in their interesting case report that the diagnosis of lithobezoar was confirmed by plain radiograph of the abdomen, which showed numerous opaque stones of different sizes scattered within the rectosigmoid and descending colon. It is well-known that emotionally disturbed or mentally retarded persons are more prone to be affected by various types of bezoars, including lithobezoar, phytobezoar, and trichobezoar. Also, it is obvious that imaging studies (conventional abdominal radiographs, ultrasonography, and CT scan) are often used in the diagnosis of gastrointestinal bezoars. Among them, CT scan is more accurate, exhibits a quite characteristic bezoar image, and offers the correct diagnosis of gastrointestinal bezoars and the identification of their number and location, particularly those impacted within anomalous recesses of gastrointestinal tract like Meckel's diverticulum.²⁻⁴ Hence, it helps guide therapy and reduces the number of unnecessary surgical interventions. It was solicited that Abdel-Rahman and Ahmed¹ employed CT scan in their studied patient in order to exactly delineate number, sites, and types of associated gastrointestinal bezoars, if any. However, I realize that the limited financial resources and technical difficulties might impede the inclusion of CT scan in the diagnostic algorithm of bezoar in developing countries like Sudan.

Mahmood D. Al-Mendalawi
Department of Pediatrics
Al-Kindy College of Medicine
Baghdad University
Baghdad, Iraq

Reply from the Author

First, I would like to thank Prof. Al-Mendalawi for his valuable comments regarding our paper on bezoar in a Sudanese patient. In his review of colonic lithobezoar, Şenol⁵ found that all cases had been diagnosed by conventional abdominal radiograph with the characteristic sign is referred to as "corn on the cub". On the other hand, plain film can miss bezoars as a cause of intestinal obstruction in 20-52% of cases.⁶ According to Ripollés,³ CT is the imaging modality of choice for confirming gastrointestinal bezoars than either conventional abdominal radiograph or sonography in solitary. It has the advantage of diagnosing small bowel

obstruction without the use of enteric contrast media.⁶ The CT is a non-invasive, fast modality to diagnose the location, aetiology, and level of intestinal obstruction. It can reliably diagnose preoperative bezoar-induced intestinal obstruction, reveal the presence of multiple bezoars, and assess co-existent complications such as bowel perforation, ulceration, bleeding, abscess formation, and peritonitis.⁷ It may even assist in the operative plans.³ The CT is the modality of choice to differentiate different causes of intraluminal mass (bezoar, tumors, or gallstones) in cases of small bowel obstruction. It readily detects bezoars from small bowel feces by the newly described floating fat density debris sign, and by length of the mass.⁴

Eighty-nine percent of small bowel bezoars can be definitely diagnosed by the characteristic CT scan finding of spherically-shaped masses containing air-fluid levels.⁴ In many series, the characteristic CT appearance of mottled gas pattern is pathognomonic of bezoar.^{3,6} Persimmon seed bezoars have a typical CT appearance (bezoar with hyperdense seeds of dispersed distribution, and wider air interval).⁴ Phytobezoars have a characteristic round or ovoid mass containing mottled gas at the obstructed site with a peculiar target sign.⁶ The trichobezoar appears as an enormous intraluminal heterogenous mass entrapped with air filling the entire stomach.³

With reference to our patient, the CT's main advantage lies in the clinical evaluation of intestinal obstruction, which is not relevant to the clinical presentation of our patient. The CT scan can evaluate patients with previous surgeries to rule out adhesive bands from bezoar.⁶ The CT scan is found in most of the Sudanese private hospitals, and quite a few public hospitals in our Capital (Khartoum). It is rather expensive, but feasible. The lack of clinical features of intestinal obstruction makes plain film radiology a proper tool for our diagnosis.

Bezoar is quite a rare diagnosis; studies involving large numbers of patients are needed to delineate the sensitivity and specificity of CT scan as an appropriate confirmatory diagnostic tool for bezoar.

Nada H. Abdel-Rahman
Awad M. Ahmed
Department of Internal Medicine
Faculty of Medicine
University of Bahri
Khartoum, Sudan

References

1. Abdel-Rahman NH, Ahmed AM. An unusual case of bezoar from Sudan. *Saudi Med J* 2014; 35: 189-191.

2. Frazzini VI Jr, English WJ, Bashist B, Moore E. Case report. Small bowel obstruction due to phytobezoar formation within Meckel diverticulum: CT findings. *J Comput Assist Tomogr* 1996; 20: 390-392.
3. Ripollés T, García-Aguayo J, Martínez MJ, Gil P. Gastrointestinal bezoars: sonographic and CT characteristics. *AJR Am J Roentgenol* 2001; 177: 65-69.
4. Altıntoprak F, Degirmenci B, Dikicier E, Cakmak G, Kivilcim T, Akbulut G, et al. CT findings of patients with small bowel obstruction due to bezoar: a descriptive study. *Scientific World Journal* 2013; 2013: 298392.
5. Senol M, Ozdemir ZÜ, Sahiner IT, Ozdemir H. Intestinal Obstruction due to Colonic Lithobezoar: A Case Report and a Review of the Literature. *Case Rep Pediatr* 2013; 2013: 854975.
6. Oh SH, Namgung H, Park MH, Park DG. Bezoar-induced Small Bowel Obstruction. *J Korean Soc Coloproctol* 2012; 28: 89-93.
7. Delabrousse E, Lubrano J, Saille N, Aubry S, Manton GA, Kastler BA. Small-bowel bezoar versus small-bowel feces: CT evaluation. *AJR Am J Roentgenol* 2008; 191: 1465-1468.

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